





810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 10

31241957.i P<sub>V</sub>QHQTVSQLQLRFLDARGSYTFKIVPSYRSAPPVVEVSNCRVEVAINAQIITIKLSTLYPFLVD QIFVQRAQFDYDPLDDELIPCAQAGIAFRVGDIQIISKDDHHWQARHDAAG GSAGLIPSPPELQEWRIACQSADKSHKEVVNCISIERSKKCRDKYLAKHNAVFQDQLDLVITY

31241959.i P<sub>V</sub>QHQTVSQLQLRFLDARGSYTFKIVPSYRSAPPVVE VSNCRVEVAINAQIITIKLSTLYPFLVD FVRAQFDYDFPLDDELIPCAQAGIAFRVGDIQIISKDDHHWQARHDAAG GSAGLIPSPPELQEWRIACQSADKSHKEVVNCISIERSKKCRDKYLAKHNAVFQDQLDLVITY

24648808.f P<sub>V</sub>QHQTVSQLQLRFLDARGSYTFKIVPSYRSAPPVVE VSNCRVEVAINAQIITIKLSTLYPFLVD FVRAQFDYDFPLDDELIPCAQAGIAFRVGDIQIISKDDHHWQARHDAAG GSAGLIPSPPELQEWRIACQSADKSHKEVVNCISIERSKKCRDKYLAKHNAVFQDQLDLVITY

6753276.m SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK GTAGLIPSPPEIQLQWRVACIAMEKTKQE<sub>O</sub>ASCTWGGKKKQYKDAITGGRASWRTPKN

11559947.m SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK GTAGLIPSPPEIQLQWRVACIAMEKTKQE<sub>O</sub>ASCTWGGKKKQYKDAITGGRASWRTPKN

CASK.h SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK GTAGLIPSPPEIQLQWRVACIAMEKTKQE<sub>O</sub>ASCTWGGKKKQYKDAITGGRASWRTPKN

23308741.d SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK GTAGLIPSPPEIQLQWRVACIAMEKTKQE<sub>O</sub>ASCTWGGKKKQYKDAITGGRASWRTPKN

22203757.m SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK VISLTS LSYPLNPIS

17568923.w SVANQTVQEQLQMLREMRGSYTFKIVPSYRTQSSCERDSEPSRSQSPANGHSTNNSVSDLPSTTQPKGRQIYVRAQFYEDEAKDDLIPCKEAGAIRFRVGDIQIISKDDINNWQGKLENSKK FVRAQFDYEP SQDDLIPCPQAGIPFKTDGIDLQVISKDDINNWQARFVSSFPSSIGNSSNAQRSNQQQVAGLIPSPPELQEWRIACLAMERSKNTCNTHCMWLNKKKKYTTTYLQKHSALFQDQLDLVITY

31982483.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

11120682.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

CaMK2b.h PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

30519907.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

CaMK2g.h PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

19424316.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

CaMK2d.h PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

6978595.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

18158420.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

6978593.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

28916677.m PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

CaMK2a.h PHTTILNPHVIVI<sub>E</sub>DAACIAYVIRLTCYIDQ<sub>O</sub> CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

24638774.f APNTTILNPHVILL<sub>E</sub>EEAACIAYVRLTCYIDQ<sub>O</sub> GIPRTRA SEETRVHRERDGGQVNHFICSGAPVAPLQ

24638772.f APNTTILNPHVILL<sub>E</sub>EEAACIAYVRLTCYIDQ<sub>O</sub> GIPRTRA SEETRVHRERDGGQVNHFICSGAPVAPLQ

24638770.f APNTTILNPHVILL<sub>E</sub>EEAACIAYVRLTCYIDQ<sub>O</sub> GIPRTRA SEETRVHRERDGGQVNHFICSGAPVAPLQ

31204371.i APNTTILNPHVILL<sub>E</sub>EEAACIAYVRLTCYIDQ<sub>O</sub> GIPRTRA SEETRVHRERDGGQVNHFICSGAPVAPLQ

32565737.w QVHTTMLENPVNTII<sub>E</sub>DAACIAYVRLTCFLDRN CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

32565735.w QVHTTMLENPVNTII<sub>E</sub>DAACIAYVRLTCFLDRN CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

17542676.w QVHTTMLENPVNTII<sub>E</sub>DAACIAYVRLTCFLDRN CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

32565732.w QVHTTMLENPVNTII<sub>E</sub>DAACIAYVRLTCFLDRN CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

25145098.w QVHTTMLENPVNTII<sub>E</sub>DAACIAYVRLTCFLDRN CRRPRTS SEETRVHRERDGGQVNHFICSGAPVAPLQ

32565743.w

32565740.w

2phk\_A

1jkk\_A

13786172.m GSALVKGGPCVESCCAPAPGSPPRTPPQQPEEAMEPE

21703722.m EEEVLL

CaMKK2.h GSALVRGSPCIVESCWAPAPGSPARMHPLRPEEAMEPE

lia8\_A

1kwp\_A AH

1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160 1170 1180 1190 12

31241957.i EEEVVKVPIGDPAFQQRRTLVLLGAHGVRGRHHIKNTLIAKYPDKYAYPIPHTRPDEENG<sub>S</sub>YYFISHDEMMADISANELEYGTHEDAMYGTLETIRRIHADGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

31241959.i EEEVVKVPIGDPAFQQRRTLVLLGAHGVRGRHHIKNTLIAKYPDKYAYPIPHTRPDEENG<sub>S</sub>YYFISHDEMMADISANELEYGTHEDAMYGTLETIRRIHADGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

24648808.f EEEVVKVPVGDPNFQRKT<sub>T</sub>LVLLGAHGVRGRHHIKNTLI<sub>S</sub>KYPD<sub>T</sub>YAYPIPHTRPAKPEEINGRSYYFISHDEMMADIGANELEYGTHEDAMYGTLD<sub>T</sub>IRRIHTEGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

6753276.m EEEVVKL<sub>-</sub>PAFKRKRT<sub>T</sub>LVLLGAHGVRGRHHIKNTLI<sub>T</sub>KHPDRFAC<sub>P</sub>IPHTTRP<sub>K</sub>DEENG<sub>N</sub>YYFVSHDEMMADIGANELEYGTHEDAMYGTLD<sub>T</sub>IRRIHTEGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

11559947.m EEEVVKL<sub>-</sub>PAFKRKRT<sub>T</sub>LVLLGAHGVRGRHHIKNTLI<sub>T</sub>KHPDRFAYPIPHTRP<sub>K</sub>DEENG<sub>N</sub>YYFVSHDEMMADIGANELEYGTHEDAMYGTLD<sub>T</sub>IRRIHTEGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

CASK.h EEEVVKL<sub>-</sub>PAFKRKRT<sub>T</sub>LVLLGAHGVRGRHHIKNTLI<sub>T</sub>KHPDRFAYPIPHTRP<sub>K</sub>DEENG<sub>N</sub>YYFVSHDEMMADIGANELEYGTHEDAMYGTLD<sub>T</sub>IRRIHTEGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

23308741.d EEEVVKL<sub>-</sub>PAFKRKRT<sub>T</sub>LVLLGAHGVRGRHHIKNTLI<sub>T</sub>KHPDRFAYPIPHTRP<sub>K</sub>DEENG<sub>N</sub>YYFVSHDEMMADIGANELEYGTHEDAMYGTLD<sub>T</sub>IRRIHTEGKMAILDVE<sub>P</sub>QALKILRTAFT<sub>T</sub>YVVFIAPLQN<sub>I</sub>ADYDGSLERLAKE<sub>R</sub>SDMLRQAYGHFFDLTIVVNNDISETIATLEADKVHSTAQWVPSW

22203757.m EEEFLTN<sub>-</sub>FILLMACECF<sub>C</sub>FLG<sub>G</sub> NCFCVATL<sub>T</sub>HTNFTT KITEQ<sub>-</sub>KEVPTPTSSALLACRYLQ<sub>M</sub>FCS<sub>C</sub>KIKAKYRKLQ

17568923.w EEEVMRLS<sub>-</sub>QYRRKTLVLLGAHGVRGRHHIKNTLI<sub>H</sub>RHPYPIPHTRP<sub>R</sub>KDEVDGKHYVFV<sub>T</sub>NEQMADIQNN<sub>E</sub>LEYGTHEESMYGTLETIRNI<sub>H</sub>KSGKIAILDVE<sub>P</sub>QALKILRTA<sub>E</sub>YSPVVFIAPLQN<sub>G</sub>QMD<sub>D</sub>PDGS<sub>L</sub>KL<sub>L</sub>NNESDVLRAFGHLD<sub>F</sub>ITNT<sub>D</sub>DDITIAQ<sub>L</sub>ERL<sub>V</sub>K<sub>P</sub>QWL<sub>P</sub>V<sub>T</sub>W

31982483.m

11120682.m

CaMK2b.h

30519907.m

CaMK2g.h

19424316.m

6978595.m PNGKENFSGGTS<sub>L</sub>WQ<sub>Q</sub>NI

18158420.m

6978593.m

28916677.m

CaMK2a.h

24638774.f DFIPOK

24638772.f DFIPOK

24638770.f DFIPOK DFVNHK

31204371.i DFIPOK

32565737.w

32565735.w

32565730.w

17542676.w

32565732.w

25145098.w

32565743.w

32565740.w

2phk\_A

1jkk\_A

13786172.m

CaMKK2.h

lia8\_A

1kwp\_A

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31241957.i LY  
31241959.i LY  
24648808.f LY  
6753276.m VY  
11559947.m VY  
CaSK.h VY  
23308741.d VY  
22203757.m ..  
17568923.w VY  
31982483.m ..  
11120682.m ..  
CaMK2b.h ..  
30519907.m ..  
CaMK2g.h ..  
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21703722.m ..  
CaMKK2.h ..  
lia8\_A ..  
1kwp\_A ..